Airbeam Technology

Overview:

New textile manufacturing technologies are being investigated to replace the aluminum structures currently used for tent frames. Existing technology involves adhesively bonding or welding together patterned, coated, flat fabric goods to form an arch shape. The use of durable and reliable pressurized airbeams reduces the weight of the structure and increases the ease of erection/strike.

Description:

Airbeams are manufactured by continuous braiding or weaving a high strength, three-dimensional fabric sleeve over an air retention bladder. This technique provides for a seamless high-strength structure. By changing weave patterns or adding different materials into the weave, the airbeam shape can be manipulated for use in many applications. In addition to shelter support structures, the following are a few potential applications for the new technology airbeam:

- Quickly deployable space structures;
- Ejection seat stabilizers for aircraft;
- High glide deployable wings;
- Pollution containment;
- Inflatable antennas.

Point of Contact:

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